

End-point assessment plan for Clinical Scientist apprenticeship standard

Apprenticeship standard number	Apprenticeship standard level	Integrated end-point assessment
ST0893	7	Non-integrated degree apprenticeship

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Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the Clinical Scientist apprenticeship standard. It is for end-point assessment organisations (EPAOs) who need to know how EPA for this apprenticeship must operate. It will also be of interest to Clinical Scientist apprentices, their employers and training providers.

Full time apprentices will typically spend 36 months on-programme (before the gateway) working towards the occupational standard, with a minimum of 20% off-the-job training. All apprentices must spend a minimum of 12 months on-programme.

The EPA period should only start, and the EPA be arranged, once the employer is satisfied that the apprentice is deemed to be consistently working at or above the level set out in the occupational standard, all of the pre-requisite gateway requirements for EPA have been met and can be evidenced to an EPAO.

For level 3 apprenticeships and above apprentices without English and mathematics at level 2 must achieve level 2 prior to taking their EPA.

The EPA must be completed within an EPA period lasting typically 6 months, after the EPA gateway.

The EPA consists of 2 discrete assessment methods.

The individual assessment methods will have the following grades:

Assessment method 1: Project and presentation with questioning

- Fail
- Pass
- Distinction

Assessment method 2: Professional discussion underpinned by portfolio

- Fail
- Pass
- Distinction

Performance in the EPA will determine the overall apprenticeship standard grade of:

- Fail
- Pass
- Distinction

EPA summary table

On-programme (typically 36 months)	Training to develop the occupation standard's knowledge, skills and behaviours (KSBs). Compile a portfolio of evidence.
End-point assessment gateway	<ul style="list-style-type: none"> • Employer is satisfied the apprentice is consistently working at, or above, the level of the occupational standard. • English and mathematics Level 2 <p>Apprentices must complete:</p> <ul style="list-style-type: none"> • A portfolio of evidence. See page 5 for details • Project title and scope to be signed off by EPAO
End-point assessment (which will typically take 6 months)	<p>Assessment method 1: Project and presentation with questioning</p> <p>With the following grades:</p> <ul style="list-style-type: none"> · Fail · Pass · Distinction <p>Assessment method 2: Professional discussion underpinned by portfolio</p> <p>With the following grades:</p> <ul style="list-style-type: none"> · Fail · Pass · Distinction

Length of end-point assessment period

The EPA will be completed within an EPA period lasting typically of 6 months after the EPA gateway. Any supporting material which underpins an EPA assessment method should be submitted at the gateway.

Order of assessment methods

The assessment methods can be delivered in any order.

Gateway

The EPA period should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, that is to say they are deemed to have achieved occupational competence. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

The EPAO determines when all gateway requirements have been met, and the EPA period will only start once the EPAO has confirmed this.

In addition to the employer's confirmation that the apprentice is working at or above the level in the occupational standard, the apprentice must have completed the following gateway requirements prior to beginning EPA:

- English and mathematics at Level 2.

For those with an education, health and care plan or a legacy statement the apprenticeships English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.

For Project and presentation with questioning:

- The apprentice will put forward the project title and scope to the EPAO and this will be signed off within a maximum of 2 weeks of the gateway being passed.
- Should the project title and scope fail to be signed off by the EPAO, the apprentice will have a further 2 weeks to submit an amended project title and scope. The EPAO will sign off the amended project title and scope within 1 week of receipt.

For Professional discussion, the apprentice will be required to submit:

- A portfolio of evidence. The format and structure of the portfolio must be agreed between the employer, the apprentice and the EPAO. However, the content must be sufficient to provide evidence that the apprentice can apply the knowledge, skills and behaviours required as mapped to assessment method 2 (AM2).
- There must be at least one piece of evidence relating to each knowledge, skill and behaviour mapped to AM2. One piece of evidence can be referenced against more than one knowledge, skill or behavioural requirement. The portfolio of evidence will typically contain 25 pieces of evidence.
- The portfolio should cover the KSBs for the assessment method it is underpinning and the activities that have been completed and referenced against the relevant KSBs. This should be supported by appropriate evidence, including photographic evidence and work products, such as work instructions, safety documentation, organisation policies and procedures as appropriate to the activities. Progress review documentation, witness testimonies, and feedback from colleagues and/or service users should also be included, in addition to the evidence. The apprentice's manager/mentor will typically support the development of the portfolio in accordance with organisational policy and procedures, although the EPAO will provide further guidance on the content.

- Any employer contributions should focus only on direct observation of evidence (for example witness statements) rather than opinions
- The evidence provided must be valid and attributable to the apprentice; the portfolio of evidence must contain a statement from the employer confirming this.
- The portfolio should not include reflective accounts or any methods of self-assessment. However, the apprentice can provide evidence of CPD and reflective practice required to meet relevant KSBs i.e. K20 and S25.

The portfolio is not directly assessed. It underpins the professional discussion assessment method and therefore should not be marked by the EPAO. EPAOs should review the portfolio of evidence in preparation for the professional discussion but are not required to provide feedback after this review of the portfolio.

Assessment methods

Assessment method 1: Project and presentation with questioning

(This assessment method has 2 components.)

Assessment method 1 component 1: Project

Overview

The project is compiled after the apprentice has gone through the gateway.

The work-based project should be designed to ensure that the apprentice's work meets the needs of the business, is relevant to their role and allows the relevant KSBs to be demonstrated for the EPA. Therefore, the project's subject, title and scope will be agreed between the employer and the EPAO within 2 weeks of the gateway being passed. The employer will ensure it has a real business application and the EPAO will ensure it meets the requirements of the EPA (including suitable coverage of the KSBs assigned to this assessment method).

The rationale for this assessment method is:

The occupation of Clinical Scientist involves carrying out clinical projects and research as part of the day-to-day role. The use of a project for assessment is, therefore, considered to be the best method of assessment and demonstrates the use of KSBs in practice.

Delivery

Apprentices will conduct a project in the form of a report.

The project starts after the apprentice has gone through the gateway process. The apprentice will conduct their project and submit it to the EPAO 14 weeks from the date of sign-off of the project title and scope.

The employer should ensure the apprentice has sufficient time and the necessary resources, within this period, to plan and undertake the project.

The EPAO must provide a generic specification for a range of qualifying projects, to enable the employer to select a project that will meet the requirements of the EPA. Note that the employer is not restricted to this selection; however, the project title and scope must be signed off by the EPAO to ensure sufficient coverage of the assigned KSBs.

The project should be in the format of either paper based or electronic.

The project may be based on, but not limited to, any of the examples below. The project may involve research or service improvement and must be linked to the clinical scientific service itself and seek to address or resolve:

- a specific problem
- a recurring issue
- an idea/opportunity.

It must be based on real work-based activities carried out in the employer's workplace as part of the day-to-day work role of the apprentice.

As a minimum all projects must include:

- an introduction, including a literature review
- the scope of the project (including key performance indicators)
- methodology
- a project plan
- research and findings
- project outcomes
- recommendations and conclusions.

The project report has a word limit of 6,000. A tolerance of plus or minus 10% is allowed, at the discretion of the apprentice.

Appendices, references, diagrams and tables will not be included in this total.

The project must map, in an appendix, how it evidences the relevant KSBs for this assessment method.

When the project is submitted, the employer and the apprentice should verify that the submitted work is that of the apprentice.

The apprentice must be allowed 14 weeks to complete and submit the project report and presentation following the EPAO's approval of the project report's title and scope.

The project report plus materials relating to the presentation (see below) must be submitted together after the gateway.

Marking

The independent assessor will review and mark the project report holistically together with the presentation and questioning as they are both components of the same assessment method. This will be done in a timely manner, as determined by the EPAO, and without extending the EPA unnecessarily. Similarly, all quality control processes will also be conducted in a timely manner, as determined by the EPAO.

The independent assessor will make all grading decisions.

Assessment method 1 component 2: Presentation and questioning

Overview

A presentation with Q&A involves an apprentice presenting to an independent assessor, focusing on a particular topic. It will be followed by questioning from the independent assessor.

Apprentices will prepare and deliver a presentation that covers the KSBs assigned to this method of assessment.

The independent assessor should have 2 weeks to review the report prior to the presentation. The apprentice needs to notify the EPAO at the submission of the project report and presentation of any technical requirements for the presentation component.

The presentation will be based on the project and will cover the following:

- a summary of the project report
- an explanation of how and why the techniques used were selected
- how the outcomes were achieved.

The presentation will be completed and submitted after the gateway and will be presented to an independent assessor, either face-to-face or via online video conferencing. If using an online platform, EPAOs must ensure appropriate measures are in place to prevent misrepresentation and ensure the apprentice is not being aided in any way e.g. use of a 360-degree camera to allow the independent assessor to view the assessment environment during the presentation.

Delivery

The presentation must be submitted with the project report 14 weeks after the EPAO's approval of the project's title and scope. The apprentice will be given 2 weeks' notice of the presentation to allow the independent assessor sufficient time to review the project report and presentation and prepare appropriate questions. The presentation and questioning will take 60 minutes, plus 10% (at the discretion of the independent assessor) if required. The presentation will typically last for 15 minutes, and the questioning will typically last for 45 minutes. The discretionary additional 10% time can be allocated in any proportion across the presentation and questioning.

The independent assessor will ask a minimum of 7 questions at the end of the presentation.

The independent assessor will use the questions from a question bank supplied by the EPAO as a guide to tailor their own questions based on the presentation. They will use them to confirm their understanding of the presentation and how it demonstrates the relevant KSBs. They may ask follow-up questions where clarification is required. The independent assessor must allow the apprentice the opportunity to evidence occupational competence at the highest level available.

To deliver the presentation, the apprentice will have access to:

- PowerPoint
- flip chart
- work products
- videos
- notes
- computer

KSBs met and answers to questions, must be recorded in writing by the independent assessor. The independent assessor will make all grading decisions.

The independent assessor will make all grading decisions based on the holistic assessment of both the project report and the presentation and questioning.

A question bank must be developed by EPAOs. The question bank must be of sufficient size to prevent predictability and the EPAO must review it regularly (at least once a year) to ensure that it, and its content, are fit for purpose. The specifications, including questions relating to the underpinning KSBs, must be varied yet allow assessment of the relevant KSBs.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

Independent assessors must be developed and trained by the EPAO in the conduct of questioning and reaching consistent judgement.

Requirements

- Apprentices must receive appropriate notice of their presentation and the available time for questions. There should be a minimum of 2 weeks' notice of the time, date and venue.
- The venue must have suitable audio-visual equipment.
- Audio and video record of the presentation and questioning must be captured.
- The independent assessor must assess the presentation using the grading criteria in this document.
- The independent assessor must:
 - a. plan the assessment prior to it taking place
 - b. ensure that the location for the assessment is appropriate
 - c. ensure the presentation and questioning takes place in a room free from distractions with no other people present except those for QA purposes with prior approval from the EPAO
 - d. ensure any special needs of the apprentice are taken into consideration in line with the EPAO's Reasonable Adjustments Policy
 - e. ensure that the apprentice understands the assessment process, the possible outcomes and the grading system
 - f. do what they can to put the apprentice at ease
 - g. ensure that the grading criteria and relevant documentation are to hand before commencing
 - h. document the outcomes using the EPAO's standard documentation
 - i. ensure the apprentice is not informed of the outcome of the assessment at this stage
 - j. confirm the specification has been fully covered and the rules have been followed
 - k. send documentation to the EPAO within the agreed time.

Venue

EPAOs must ensure that the presentation and questioning elements are conducted in a suitable controlled environment in any of the following:

- employer's premises
- other suitable venue selected by the EPAO (for example a training provider)

The venue should be a quiet room, free from distraction and external influence.

Supporting material

EPAOs will produce the following materials to ensure that this assessment method is marked consistently and accurately:

- outline of the assessment method's requirements
- examples of project titles
- marking materials
- question bank
- independent assessor training materials
- assessment specifications
- grading guidance
- assessment recording documentation
- examples of projects

Assessment method 2: Professional discussion underpinned by portfolio (This assessment method has 1 component.)

Assessment method 2 component 1: Professional discussion

Overview

This assessment will take the form of a professional discussion which must be appropriately structured to draw out the best of the apprentice's competence and excellence and cover the KSBs assigned to this assessment method. Questions asked should assess the KSBs assigned to this assessment method and the apprentice may use their portfolio to support their responses.

The rationale for this assessment method is:

A professional discussion is not simply a question and answer session but a meaningful, in-depth two-way dialogue between the apprentice and the independent assessor. It allows the apprentice to use standardised questions and scenarios as a starting point to explore their own practice and experiences with the independent assessor to show how they demonstrate the occupation's KSBs and that they are occupationally competent. A professional discussion is a well-recognised method of checking knowledge, skills and behaviours.

Delivery

The independent assessor will conduct and assess the professional discussion.

Apprentices must be given at least two weeks' notice ahead of the professional discussion. The underpinning portfolio will have been submitted in line with EPAO requirements and at the gateway and must evidence all of the KSBs mapped to this assessment method. The independent assessor can use the contents of the portfolio to identify discussion topics for the professional discussion.

The professional discussion must last for 90 minutes. The independent assessor has the discretion to increase the time of the professional discussion by up to 10% to allow the apprentice to complete their

last answer. Further time may be granted for apprentices with appropriate needs, in-line with the EPAO's Reasonable Adjustments policy.

During this method, the independent assessor must combine questions from the EPAO's question bank and those generated by themselves.

The professional discussion will be conducted as follows:

It will be undertaken by an independent assessor. The independent assessor's role will be to manage, open and close the session, ask independent assessor generated questions and make the final assessment decision based on their own assessment and following any EPAO guidance. The professional discussion is underpinned by the portfolio submitted as a gateway requirement. Questioning should be used to assess KSBs mapped to this method and to explore the apprentice's ability to deal with KSBs in a variety of circumstances. Apprentices will be expected to refer to examples in their portfolio to support their answers. A minimum of 15 questions should be asked. Independent assessors must use the question bank as a source for questioning and are expected to use their professional judgment to tailor those questions appropriately.

The apprentice and the independent assessor will have access to their own copies of the portfolio throughout the professional discussion and both can refer to it as needed.

Independent assessors must be developed and trained in the conduct of professional discussions, how to design their own questions from reviewing portfolio content, and in reaching consistent judgement by their EPAO. The independent assessor will make notes of the apprentices' response to questions.

The professional discussion should be graded fail, pass or distinction. The portfolio underpins the professional discussion and will not be assessed or graded. Independent assessors must allocate grades using the grading criteria.

The independent assessor must use the assessment tools and procedures that are set by the EPAO to record the professional discussion.

The independent assessor will make all grading decisions.

Requirements

- The EPAO will circulate a bank of questions to assess the KSBs addressed by the professional discussion.
- The independent assessor must assess the professional discussion using the grading criteria in this document.
- The independent assessor must:
 - a. plan the assessment prior to it taking place
 - b. ensure that the location for the assessment is appropriate
 - c. ensure the professional discussion takes place in a room free from distractions with no other people present except those for QA purposes with prior approval from the EPAO
 - d. ensure any special needs of the apprentice are taken into consideration in line with the EPAO's reasonable adjustments policy
 - e. ensure that the apprentice understands the assessment process, the possible outcomes and the grading system
 - f. do what they can to put the apprentice at ease
 - g. ensure that the grading criteria and relevant documentation are to hand before commencing

- h. document the outcomes using the EPAO's standard documentation
- i. ensure the apprentice is not informed of the outcome of the assessment at this stage
- j. send documentation to the EPAO within the agreed time

Venue

The professional discussion should take place in a quiet room, free from distractions and influence.

The professional discussion can take place in any of the following:

- employer's premises
- a suitable venue selected by the EPAO (for example a training provider's premises)

Video conferencing can be used to conduct the professional discussion but the EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided in some way.

Other relevant information

Independent assessors are responsible for generating suitable questions in line with the EPAO's training and standardisation process. A question bank must be developed by EPAOs. The 'question bank' must be of sufficient size to prevent predictability and the EPAO must review regularly (at least once a year) to ensure that it, and its content, are fit for purpose. The questions relating to the underpinning KSBs, must be varied yet allow assessment of the relevant KSBs.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

Independent assessors must be developed and trained by the EPAO in the conduct of professional discussion and reaching consistent judgement.

EPAOs will produce the following material to support this assessment method:

- outline of the assessment method's requirements
- Independent assessor training materials
- Assessment recording documentation
- marking materials
- question bank

Reasonable adjustments

The EPAO must have in place clear and fair arrangements for making reasonable adjustments for this apprenticeship standard. This should include how an apprentice qualifies for reasonable adjustment and what reasonable adjustments will be made. The adjustments must maintain the validity, reliability and integrity of the assessment methods outlined in this end-point assessment plan.

Weighting of assessment methods

All assessment methods are weighted equally in their contribution to the overall EPA grade.

Grading

Assessment method 1: Project and presentation with questioning

KSBs	Fail	Pass	Distinction
K5 K6 K7 K14 K16 K18 S4 S5 S7 S8 S9 S10 S11 S12 S13 S14 S16 S19	Does not meet all the pass criteria	<p>The apprentice meets all the pass criteria:</p> <p>Select, apply and critically appraises analytical methodologies and techniques, clinical investigation strategies, new technologies and problem-solving techniques including justifying those selected and used for the project. (K5, K16, S4, S8, S9)</p> <p>Appraises current and emerging practice and explains how this relates to their own professional practice. Evaluates the impact of the project on professional practice (K6)</p> <p>Gather and evaluate evidence from different sources, including relevant scientific literature to inform profession. Evidences the practical application of information and data searching methodologies, and the strategies for conducting effective research including research ethics. (K7, K14, S12, S13, S14)</p> <p>Analyses, interprets and evaluates data, summarises findings and formulates recommendations. (S5)</p> <p>Applies change management theory leading to innovation and improved service, within the scope of their practice. (K18)</p>	<p>The apprentice meets all of the pass criteria and the following distinction criteria:</p> <p>Justifies recommendations made and critically evaluates the wider impact of those recommendations. (S5)</p> <p>Justifies the selection and any modification or development of techniques used. (S7)</p> <p>Justifies the strategies and techniques utilised to correct errors/problems. (S10, S11)</p> <p>Critically appraises the impact of the project beyond own practice and recommends suggestions for further service improvement and/or research. (S14)</p>

	<p>Develops or utilises appropriate procedures and techniques to improve service delivery. (S7)</p> <p>Uses techniques to solve problems and find source of errors and devise or implement strategies to correct them and/or mitigate their effect. (S10, S11)</p> <p>Presents data and research findings using language and materials appropriate for a peer audience, explains how deadlines were met and evaluates their role as project lead. (S16, S19)</p>	
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Assessment method 2: Professional discussion underpinned by portfolio

KSBs	Fail	Pass	Distinction
K1 K2 K3 K4 K8 K9 K10 K11 K12 K13 K15 K17 K19 K20 K21 S1 S2 S3 S6 S15 S17 S18 S20 S21 S22 S23 S24 S25	Does not meet all the pass criteria	<p>The apprentice meets all the pass criteria:</p> <p>Explains how they comply with and apply the relevant legislation, frameworks, codes of practice and guidance to their role. Provides examples of how they have challenged and/or reported inappropriate behaviour or explains how they would do this. (K1, S1, B1, B3, B5)</p> <p>Explains, with examples, how they work within the limits of personal and professional competence, including examples of when they have had to justify their actions. Explains how they determine when to seek advice. Manages time, resources and workload appropriate to organisational requirements, providing examples of each of these. (K2, S2)</p>	<p>The apprentice meets all of the pass criteria and the following distinction criteria:</p> <p>Evaluates effective resource management and working that has a positive impact on wider service delivery and provides an example of this from their own practice. (S2)</p> <p>Critically evaluates how the application of their clinical and scientific knowledge within their clinical practice contributes to improvement and innovation in care for service users. (K3, K4, S3)</p> <p>Critically analyses the factors that contribute to the success or failure of effective partnership working arrangements. (K10, S27)</p> <p>Critically evaluates the organisation's audit procedures and</p>

<p>S26 S27 B1 B2 B3 B4 B5 B6</p>		<p>Illustrates, with the use of examples, the breadth and depth of clinical and scientific knowledge relevant to their specialty and explains how they apply this within their clinical practice to inform decisions and deliver effective care for service users. (K3, K4, S3)</p> <p>Provides examples of specific, relevant emerging clinical, scientific, analytical, diagnostic, monitoring, treatment and therapeutic procedures, as appropriate to specialism, and evaluates how these have resulted in changes to their own practice. (S6)</p> <p>Analyses the different communication strategies needed in the healthcare context, including the use of conflict management techniques to handle difficult situations. Provides examples of when they adapted the communication of complex, contentious or sensitive information to suit the diverse needs and knowledge level of colleagues and service users, checking the understanding of the audience, ensuring an inclusive and respectful approach. (K8, K9, S15, B2)</p> <p>Explains their role as part of the healthcare team and consequently on the wider health and social care function and provides examples of building effective and sustainable partnership working with different stakeholder groups. (K10, S27)</p>	<p>recommends improvements. Explains and justifies how they would assess the effectiveness of service improvements. (S23)</p> <p>Critically evaluates at least one example of their CPD activity and explains how this has or could impact their professional practice, service users or the wider organisation. (K20)</p>
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		<p>Analyses leadership and management techniques and strategies and explains the role and attributes of an effective leader within clinical science, and evidences examples from their own practice. (K11)</p> <p>Discusses the use of accreditation, quality management systems and standards within the specialism and demonstrates their application with a range of examples from their own practice. (K12, S17)</p> <p>Discusses the importance of quality assurance and quality control within their own specialism. Describes good audit trail practice, provides an example of an audit undertaken, justifies the methodology selected and explains the corrective actions taken. Provides examples of when they have initiated service improvements (K13, S18, S23)</p> <p>Explains how they have used learning and development strategies within their own practice and provides an example of where they have facilitated learning and provided and received feedback. (K15, S20, B4)</p> <p>Provides an example of undertaking a risk assessment in practice and explains how they proactively manage sources of risk and apply relevant health and safety techniques to maintain own safety and</p>	
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		<p>wellbeing, and that of colleagues, service users or the public, and describes the process for raising concerns (K17, S21, B6)</p> <p>Provides examples of a selection of appropriate equipment and methodologies to ensure safe working practices in accordance with relevant guidelines and legislation. (S22)</p> <p>Explains the principles of confidentiality, information governance and management of records, and how they have applied relevant guidelines and legislation within their own practice. (K19, S24)</p> <p>Discusses the importance and role of CPD and critical reflection in maintaining their fitness to practice and identifies areas for improvement. (K20, S25)</p> <p>Evaluates the application, implementation and security of digital technology within the healthcare environment as appropriate to specialism and illustrate use of digital systems with examples from own practice. (K21, S26)</p>	
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Overall EPA grading

All EPA methods must be passed for the EPA to be passed overall.

Apprentices must meet all the pass criteria to gain a pass for each assessment method.

Apprentices must meet all the distinction criteria to gain a distinction for each assessment method.

Apprentices must gain a pass in both assessment methods to gain a pass overall.

Apprentices must gain a distinction in both assessment methods to gain a distinction overall.

Grades from individual assessment methods should be combined in the following way to determine the grade of the EPA as a whole:

Assessment method 1: Project and presentation with questioning	Assessment method 2: professional discussion	Overall grading
Fail	Any grade	Fail
Any grade	Fail	Fail
Pass	Pass	Pass
Pass	Distinction	Pass
Distinction	Pass	Pass
Distinction	Distinction	Distinction

Re-sits and re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take. A re-sit does not require further learning, whereas a re-take does.

Apprentices should have a supportive action plan to prepare for the re-sit or a re-take. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

An apprentice who fails an assessment method, and therefore the EPA in the first instance, will be required to re-sit or re-take any failed assessment methods only.

The timescale for a re-sit/re-take is agreed between the employer and EPAO. A re-sit is typically taken within two months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required and is typically taken within four months of the EPA notification. If the apprentice fails the project they will be required to amend it in accordance with the independent assessor's feedback. Apprentices will have 8 weeks to complete and submit the resit/retake project and presentation materials, with the EPAO having 2 weeks to review the materials before facilitating the presentation. The feedback can advise an apprentice on the area(s) failed in the EPA, but not advise what they need to do to overcome it in a re-sit or re-take.

All assessment methods must be taken within a three-month period of each other, otherwise the entire EPA will need to be re-sat/re-taken, unless in the opinion of the EPAO exceptional circumstances apply outside the control of the apprentice or their employer.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to distinction.

Where any assessment method has to be re-sat or re-taken, the apprentice will be awarded a maximum EPA grade of pass, unless the EPAO determines there are exceptional circumstances requiring a re-sit or re-take.

Roles and responsibilities

Role	Responsibility
Apprentice	<p>As a minimum, apprentices should:</p> <ul style="list-style-type: none"> • participate in development opportunities to meet the knowledge, skills and behaviours as outlined in the occupational standard • undertake 20% off-the-job training as arranged by the employer and EPAO • meet all gateway requirements when advised by the employer • understand the purpose and importance of EPA and undertake EPA
Employer	<p>As a minimum, employers should:</p> <ul style="list-style-type: none"> • support the apprentice to achieve the KSBs outlined in the occupational standard to their best ability • determine when the apprentice is working at or above the level outlined in the occupational standard and is ready for EPA • select the EPAO • confirm all EPA gateway requirements have been met • confirm arrangements with EPAO for the EPA (who, when, where) in a timely manner • ensure apprentice is well prepared for the EPA • not be involved in the delivery of the EPA
EPAO	<p>As a minimum EPAOs should:</p> <ul style="list-style-type: none"> • understand the occupational role • appoint administrators/invigilators and markers to administer/invigilate and mark the EPA • provide training and CPD to the independent assessors they employ to undertake the EPA • provide adequate information, advice and guidance documentation to enable apprentices, employers and providers to prepare for the EPA • deliver the end-point assessment outlined in this EPA plan in a timely manner • prepare and provide all required material and resources required for delivery of the EPA in-line with best practices • use appropriate assessment recording documentation to ensure a clear and auditable mechanism for providing assessment decision feedback to the apprentice • have no direct connection with the apprentice, their employer or training provider i.e. there must be no conflict of interest

	<ul style="list-style-type: none"> • maintain robust internal quality assurance (IQA) procedures and processes, and conduct these on a regular basis • conform to the requirements of the nominated external quality assurance body • organise standardisation events and activities in accordance with this plan's IQA section • organise and conduct moderation of independent assessors' marking in accordance with this plan • have, and operate, an appeals process • arrange for certification with the relevant training provider
Independent assessor	<p>As a minimum an independent assessor should:</p> <ul style="list-style-type: none"> • understand the occupational standard and end-point assessment plan • deliver the end-point assessment in-line with the EPA plan • comply to the IQA requirements of the EPAO • be independent of the apprentice, their employer and training provider(s) i.e. there must be no conflict of interest • satisfy the criteria outlined in this EPA plan • hold or be working towards an independent assessor qualification e.g. A1 and have had training from their EPAO in terms of good assessment practice, operating the assessment tools and grading • have the capability to assess the apprentice at this level • attend the required number of EPAOs standardisation and training events per year (as defined in the IQA section)
Training provider	<p>As a minimum the training provider should:</p> <ul style="list-style-type: none"> • work with the employer to ensure that the apprentice is given the opportunities to develop the KSBs outlined in the standard and monitor their progress during the on-programme period • advise the employer, upon request, on the apprentice's readiness for EPA prior to the gateway • not be involved in the delivery of the EPA • play no part in the EPA itself

Internal Quality Assurance

Internal Quality Assurance (IQA)

Internal quality assurance refers to the requirements that EPA organisations must have in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPA organisations for this EPA must:

- appoint assessors who are registered with the Health and Care Professions Council, or where this is not practical, are recognised by a relevant professional body
- appoint independent assessors who have knowledge of the following occupational areas: be in current practice and be occupationally competent in subject specialism
- appoint independent assessors who have recent relevant experience of the occupation/sector at least the same level as the apprentice gained in the last three years or significant experience of the occupation/sector.
- appoint independent assessors who are competent to deliver the end-point assessment
- provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading
- have robust quality assurance systems and procedures that support fair, reliable and consistent assessment across the organisation and over time
- operate induction training and standardisation events for independent assessors when they begin working for the EPAO on this standard and before they deliver an updated assessment method for the first time
- ensure independent assessors attend standardisation events on an ongoing basis and at least once per year

Affordability

Affordability of the EPA will be aided by using at least some of the following practice:

- using an employer's premises
- using video conferencing

Professional body recognition

Professional body recognition is not relevant to this apprenticeship standard.

Mapping of knowledge, skills and behaviours (KSBs)

Assessment method 1: Project and Presentation with questioning

Knowledge
K5 The analytical methodologies and techniques appropriate to the specialism and the performance and limitations of those methodologies.
K6 Current and emerging procedures relevant to professional practice.
K7 Information and data searching methodologies e.g. literature searching, patient data searches, search algorithms.
K14 Strategies and methodologies for conducting effective research, including research ethics and statistics.
K16 Scientific and clinical investigation strategies and problem-solving techniques, appropriate to practice.
K18 Change management theory in relation to innovation and service improvement, appropriate to practice.

Skills
S4 Select and perform, if required, the appropriate analytical technique relevant to the given data set.
S5 Assess and interpret the results of data analysis, report appropriately in accordance with the clinical and scientific context and recommend further investigations where appropriate.
S7 Develop, introduce or modify procedures and techniques to improve service delivery, as appropriate.
S8 Compare procedures and techniques against references or baseline and take action, as appropriate.
S9 Assess and evaluate new technologies prior to their routine use.
S10 Select, and if necessary, develop, the appropriate methodology(ies) to investigate the problem or source of error.
S11 Take appropriate action to correct problem or source of error based on the results of the investigation.
S12 Search and critically appraise scientific literature, including literature on new and emerging technologies, and other sources of information.
S13 Implement suitable evidence gathering strategies.
S14 Evaluate evidence to inform professional practice.
S16 Lead projects to successful completion within agreed and defined timescales eg audits, research projects.
S19 Present data and/or research findings to peers, in appropriate forms.

Assessment method 2: Professional Discussion underpinned by Portfolio

Knowledge
K1 The Health and Care Professions Council standards of proficiency for clinical scientists; codes of conduct for relevant professional bodies; appropriate legislation and statutory frameworks and employers' policies and procedures.
K2 Limits of own scope of practice, knowledge and skills, including strategies for time and resource management.
K3 The underpinning clinical and scientific principles relevant to the specialism and associated practice.
K4 Anatomical, physiological and biochemical functions of the human body appropriate to the specialism.
K8 Communication strategies within a healthcare context, including conflict management techniques, and the need to provide individuals with appropriate information.
K9 The differing needs and rights of individuals.
K10 The structure and function of health and social care services, including the composition of the multidisciplinary team and the role of the Clinical Scientist within it, relevant to scope of practice, and the need for effective partnership working, as appropriate.
K11 Leadership and management techniques and strategies appropriate to practice.
K12 Accreditation, quality systems and relevant quality standards, appropriate to the specialism.
K13 Audit methodologies, quality control and quality assurance techniques, reporting mechanisms and corrective action techniques.
K15 Learning and development strategies, including giving and receiving feedback, appropriate to practice.
K17 Health and safety techniques relevant to areas of practice and the importance of maintaining own safety and that of patients, colleagues and the public.
K19 The concepts and limits of confidentiality, the principles of information governance and the processes and procedures for managing records and other information.
K20 The importance of continuing personal and professional development and the role of critical reflection in maintaining fitness to practise.
K21 The application, implementation and security of digital technology within the healthcare environment as appropriate to the specialism.

Skills
S1 Interpret, apply and comply with legislation, statutory frameworks, professional codes of practice and guidance.
S2 Work within limits of personal and professional competence, justify and take responsibility for own actions and seek advice when required. Manage time, resources and workload effectively.

S3 Apply relevant clinical and scientific knowledge in the clinical context, to inform own decision making, and that of service users, as appropriate.
S6 Identify emerging clinical, scientific, analytical, diagnostic, monitoring, treatment and therapeutic procedures, as appropriate, and adapt practice accordingly.
S15 Determine existing levels of knowledge, select the appropriate methodology(ies) and approaches in accordance with individuals' needs, and use appropriate forms of communication with a diverse range of audiences, including colleagues and service users.
S17 Set, maintain and apply standards, and undertake quality control and assurance techniques.
S18 Undertake audit and take appropriate actions to ensure quality of processes/procedures.
S20 Facilitate learning and provide feedback to others, as appropriate.
S21 Undertake risk assessments to identify and manage sources of risk in the workplace.
S22 Select the appropriate equipment and methodology(ies) to ensure safe working practices, in accordance with relevant guidelines and legislation.
S23 Maintain an effective audit trail and initiate service improvements.
S24 Keep accurate and comprehensive records and manage information in accordance with relevant legislation and guidelines.
S25 Reflect on and critically review practice and identify areas for personal and professional development.
S26 Use digital systems in a manner appropriate to function and clinical scientific context.
S27 Work in partnership with others to build sustainable professional relationships.

Behaviours
B1 Be open, honest, compassionate, act with integrity at all times, observe duty of candour and maintain confidentiality.
B2 Be respectful, non-judgemental and engage with people in an inclusive and non-discriminatory manner.
B3 Maintain good character as outlined in professional Code of Conduct and refrain from activities which would bring the profession or organisation into disrepute.
B4 Be adaptable and able to respond professionally to all feedback.
B5 Be prepared to challenge and/or report inappropriate behaviours and practices, using established procedures.
B6 Take a proactive approach to own personal wellbeing, and that of others, reporting concerns as appropriate.